

REMARKS

Claims 22-37 are all the claims presently pending in the application. Applicant gratefully acknowledge the Examiner's indication that claims 9-10 and 19-20 would be allowable if rewritten in independent form. Claims 1-21 have been canceled, and new claims 22-37 have been added to rewrite the allowable claims in independent form. No new matter has been added.

The claims have been amended in a manner believed fully responsive to all points raised by the Examiner, thereby to pass all of the claims to allowance. No new matter has been added.

It is noted that the claim amendments herein are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims, or for any statutory requirements of patentability.

Further, it is noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

An Information Disclosure Statement is being filed shortly to make of record JP-A-8-11304 (JP '304).

With regard to claim 23, the claimed invention is configured such that the communication flow passage leading from the pressure generating chamber to the nozzles is narrower than the width of the pressure chamber. Furthermore, the claimed invention recites that a part of the communication flow passage is located outside of a side wall face of the pressure generating chamber.

The configuration disclosed in JP '304 has a problem in joining a chamber plate and a nozzle plate with adhesive agent. That is, the joining position of the chamber plate and the

nozzle plate and nozzle openings are so close that the adhesive agent might overflow to the nozzle openings. In the worst case, the nozzle openings are blocked by the adhesive agent such that the discharging characteristic is influenced.

On the other hand, in the claimed configuration of claim 23, the communication flow passage is located outside of the side wall face of the pressure generating chamber. In this configuration, a certain distance can be taken between the joining position of the chamber plate and the nozzle plate and the nozzle opening. When the adhesive agent overflows to the side of the nozzle opening while joining the chamber plate and the nozzle plate with the adhesive agent, the adhesive agent does not reach the nozzle opening. Accordingly, the tolerance to flow out of the adhesives can be increased.

Furthermore, the cited references fail to teach or suggest the claimed invention.

Suzuki discloses an inkjet head including pressure generating chambers that are arranged in a row and an array of nozzles disposed correspondingly to the array of pressure generating chambers. The inkjet head is provided with two sets of the arrays of pressure generating chambers and the corresponding arrays of nozzles.

In contrast, the claimed invention has only one array of nozzles and two arrays of pressure generating chambers opposing to each other with respect to the array of nozzles. The claimed configuration allows the intervals of the pressure generating chambers to be reduced in an inkjet head having one array of nozzles, thereby enabling high density packaging.

In the configuration of Suzuki, in which the arrays of nozzles correspond to the arrays of pressure generating chambers in a one-to-one relationship, the packaging density of the nozzles are the same as the packaging density of the pressure generating chambers.

Accordingly, the packaging density of the pressure generating chambers is restricted so that high density packaging is limited.

In contrast, the claimed invention allows twice the packaging density of the conventional configuration.

Figure 1 of Hashizume discloses a relationship of N_p (distance between nozzles) and C_p (distance between center lines of pressure generating chambers) as $N_p \approx C_p$, not $C_p \approx 2N_p$. This is clear from Figure 1 of Hashizume since the number of the nozzles in one array of nozzles is the same as the number of the pressure generating chambers in one array of pressure generating chambers in Figure 1 of Hashizume.

Thus, the cited references do not teach or suggest the claimed invention.

FORMAL MATTERS AND CONCLUSION

The Examiner is requested to acknowledge receipt of the priority document filed on December 3, 2003.

In response to Examiner's objection to informalities in the specification, Applicant respectfully submits that the piezoelectric element group 15 and ink flow passage board 22 are clearly located in Figure 2 with brackets. Further the specification has been amended to make clear reference numeral 18.

In view of the foregoing, Applicants submit that claims 23-37, all of the claims presently pending in the application, are patentably distinct over the prior art of record and is in condition for allowance. Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

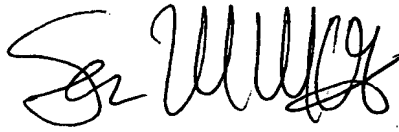
Serial No.: 10/725,379

12

Docket No. H64-163096M/MNN
NGB.341

The Commissioner is hereby authorized to charge any deficiencies in fees, including excess claims fees, or to credit any overpayment of fees to Attorney's Deposit Account No. 50-0481.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Sean M. McGinn".

Sean M. McGinn, Esq.
Registration No.: 34,386

Date: 10/12/05
McGinn Intellectual Property
Law Group, PLLC
8321 Old Courthouse Road, Suite 200
Vienna, Virginia 22182-3817
(703) 761-4100
Customer No. 21254